W6IFE San Bernardino Microwave Society Newsletter

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The 1 April 1999 meeting of the SBMS will Dave, WA6CGR tell us about the design and construction of his frequency locked SSB 24 GHz rig. No fooling!! A reminder to all that SBMS elections are held in April. Beware or be there. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway in Corona, CA at 1900 hours local time on the first Thursday of each month..

Last meeting- Chuck, WA6EXV gave a good talk on the possible use of the Primestar old style (orange peal shape) dish that may be coming available as they upgrade to the newer round type. Both the original feed and dish perform outstanding 38 dB gain at 59% efficiency 1.3 degree beamwidth at 10,368 MHz. The dish appears to loose gain (45 dB calc) at 24 GHz (31 dB measured on Chuck's short range and 0.83 degree beamwidth) even with a scalar feed. [PRIME STAR ANTENNA TEST--The following test was conducted to compare the Prime Star dish to the RCA/DSS dish at 24.150 GHz, since the tests conducted on my antenna range were questionable due to the short range used (92 feet).RESULTS Antenna Gain (Cal) Gain (Meas.)

Prime Star 45.38dB 38.5dB

RCA/DSS 38.67dB 38.0dB

Gain Difference 6.71dB >0.5dB

TEST SETUP--On 10 March, Bill, WA6QYR and I travelled to the El Paso peak area where we were able to locate our two stations such that we had about one half a mile shot over an unobstructed path. Bill set up his station as a fixed beacon and I proceeded to run a series of tests comparing the gain of the two antennas. I had a precision attenuator installed in the receiver I.F. line so that I would be able to measure the difference in gain of the two antennas. Care was taken to assure that the signal at the received end was well in the linear region. Two sets of gain measurments were taken on each antenna over a period of one hour. There was no change in gain measurments between the two sets. The RCA/DSS dish had been previously measured on the antenna range using a calibrated standard gain horn. 73 Chuck Swedblom] Thanks Chuck for the practical stuff. Visitors were Skip Alminas, K6LGL of Santa Monica and John Stephensen, KD6OZH from west Los Angeles. Welcome. The award plaques are in work for John Anderson, WD4MUO/0 who won the ARRL 10 GHz contest and to Bill Burns, WA6QYR who won the 10 GHz and Up segment. Bill, WA6QYR handed out residual copies of the Gunnplexer collection that Dick, WB6DNX assembled. Bill now has the originals. One of the articles that came from the now defunct Ham Radio Magazine was scanned by Bill and sent to Chip, N6CA for posting on the SBMS website. Derek, KN6TD is investigating what 10 GHz frequencies to put his 150 MHz bandwidth digital repeater on in Southern California. The Palos Verde 10 GHz beacon is currently is down and Chip, N6CA is hoping to have it back up on Mt. Santiago this summer before the contest. No nominations were expressed for the SBMS 1999-2000 officers. Nominations will be opened at the April meeting and an election held. It was proposed that the new 2 GHz rigs get tested out during the June VHF contest. 27 people present

SBMS Winter Social- Chuck, WA6EXV provided a LOT of data in his miniclass on how to design an amplifier circuit, make a photographic image of it, print and etch a printed circuit board, and finally test the end unit in the box for its "S" parameters. There were 18 people at Chuck's house during the day. Gordon, WA6FMX; Dick WA6DNX; Jim, K6ML; Jeff, N6VR; Carl, WD6DRJ; Ken, WB6DTA; Bob, K6ITU; Gordon WB6YLI; Gene WA6YOJ; Bob, W6SYA; Larry, K6HLH and his wife; George, K6MBL and his wife; Bill WA6QYR and his wife; and Chuck, WA6EXV and his wife. The social dinner at Two Sisters in Inyokern was successful with lots of discussion and good food.

Scheduling-

May 6 TBD

June 3 TBD

Thanks to Emil Pocock for the publicity on SBMS, its newsletter and web page. as shown in his column "The World above 50 MHz" in the March QST. One correction needs to be made. The SBMS web page is at http://www.ham-radio.com/sbms/. The webmaster has edited the address to accept that in QST and point to the correct one automatically.

Wants and Gots for Sale

Free- 4 ft fiberglass dish and radome (was on 12 GHz). Pick up in Brea Dick WB6DNX 714-529-2800

Free- UT-141 semi rigid cable Larry K6HLH 805-264-4110

For sale-HP608E (goes to 450 MHz) $100 Ken WB6DTA 818-848-9059 HP8708 synchronizer (with manual) for HP 608 package deal $175 for both Doug K6JEY 512-424-3737

Need Dial scales for HP8620C sweep generator 10 MHz to 1.3 GHz, 100 MHz-2.0 GHz, 1.8 GHz to 4.2 GHz, 8 GHz to 12.4 GHz Bob W6SYA 818-248-3683 w6sya-bob@world.att.net

Activity reported at the 3 March 1999 meeting- Chuck, WA6EXV is designing a 2 GHz power amp using the parts from the commercial "2 GHz" excess equipment; Bill, WA6QYR scanned the Ham Radio magazine material for the website and unsoldered a number of pc boards for the components; Bob, W6SYA is finishing up his 2 GHz rig and had some contacts with WB6DTA; Ken, WB6DTA finished up his 2 W@ GHz PA; Doug, K6JEY picked up some 39 GHz 100 mw sources and is building some test equipment; Mel, WA6JBD found

some 47 GHz sources at Richardson Electronics in IL as well as 24 GHz gunns with varactor diodes; Gene, WA6YOJ is building a boomerang for 10 GHz; Ed, K6ODV hopes to have his 2 GHz rig on the air this weekend and came up with one of the Drake down converters to modify; Derek, KN6TD is working on some boxes for his 10 GHz rig and is testing some waveguide; Dick, WB6DNX tested some of the Qualcomm synthesizers.

73's Bill